

A N  
A C C O U N T  
O F A  
P A R T I C U L A R K I N D  
O F  
R U P T U R E,

Frequently attendant upon  
N E W - B O R N C H I L D R E N ;  
And sometimes met with  
I N A D U L T S ;

V I Z .

That in which the I N T E S T I N E , or O M E N T U M ,  
is found in the same Cavity, and in contact  
with the T E S T I C L E .

---

By *P E R C I V A L P O T T*,  
Senior Surgeon to S T . B A R T H O L O M E W ' s H O S P I T A L .

---

The T H I R D E D I T I O N .

---

---

L O N D O N :

Printed for L . H A W E S , W . C L A R K E , and  
R . C O L L I N S , P a t e r - n o s t e r R o w .

M . D C C . L X X V .






A N

## A C C O U N T

Of a particular

## KIND of RUPTURE.

## S E C T. I.


 N performing the operation for what is called a Strangulated Rupture, the portion of intestine, or omentum, which had passed out from the abdomen, has sometimes been found in the same cavity, and in contact with the naked testicle.

THIS is a case which has been mentioned by one or two late writers, who have supposed it to be produced by a  
                     B                      breach,

breach, or laceration, of that production of the peritoneum, which formed the hernial sac, and contained the portion of intestine, or omentum, when first it passed out from the belly.

IN order to understand rightly the kind of rupture, which makes the subject of my present inquiry, it may be necessary to premise a general description of the more frequent species of intestinal and omental rupture, and to shew wherein consists the essential difference between these and that.

THE portion of intestine or omentum, which by being thrust forth from the cavity of the belly, forms a common rupture, is contained in a firm, strong, membranous pouch or bag, called the hernial sac: this sac is formed by a production of the peritoneum, pushed out by the intestine, &c. through the opening in the tendon of the obliquus descendens muscle of the abdomen, passing





hing in some no lower than the groin, in others into the lower part of the scrotum.

THE peritoneum, of which this sac is formed, is extremely dilatable, as pregnancy, dropsy, and many diseases prove; and instead of seeming thereby in danger of bursting, is frequently found to become thicker and stronger in proportion to its distention.

IN this sac are contained a portion of intestine, or omentum, (or both) and a small quantity of a fluid; the spermatic vessels pass down behind it, and its cavity is perfectly distinct from, and has no communication with, that sacculus in which the testicle is generally included.

THIS is a succinct account of a common intestinal or omental rupture; but in that which makes my present subject, the intestine or omentum, or both, are found in the same bag, and in contact with the naked testicle.

THEY who suppose this to be produced by a breach, or laceration of the peritoneum, suppose also that the intestine, &c. passed out from the abdomen in a hernial sac, formed in the usual manner ; that this sac originally composed a cavity perfectly distinct from that in which the testicle was included (called tunica vaginalis testis) ; but that by some means this sac suffers a breach or laceration, that the membrane which divides the tunica vaginalis testis, from the tunica vaginalis of the chord, is broke through also, and that by this means the intestine and testicle are brought into contact with each other in the same common cavity.

By this means the ancient doctrine of a hernia caused by breach or rupture of the peritoneum, is revived, though the dissection of the parts has always proved it to be untrue ; the peritoneum forming a hernial sac, whatever size it may be  
dis-

distended to, being always found entire, unless it has been wounded, or is mortified.

RUPTURES attended with that particular circumstance which brings them under the description mentioned in the Title, are said to be very rare; but, from what I have observed, both in the living, and in the dead, I am inclined to believe that they happen much oftner to adults, than they are suspected to do.

WHEN I published my *General Treatise on Ruptures*, I had not enough considered this particular kind, to be able to say any thing positive concerning it; I thought the breach of the peritoneum highly improbable, and from what I had seen of the case, was sure that it must be owing to some other cause; but, as I was not perfectly satisfied what that was, I did not chuse to assert any thing about it, and spoke of it as a thing not frequent, and produced by accident.

SINCE

SINCE that time I have sought for, and found many opportunities of inquiring into this matter, and of verifying what was then only probable conjecture : I have with great care examined a variety of subjects, and flatter myself that I have traced the disease to its true cause. The anatomy of the parts appeared to me as I shall represent it in the following pages, and all the deductions, and inferences which I shall make from them, are such as appear to me to be natural, and true, and such as place the origin of this kind of rupture in a clear light.



S E C T.

## S E C T. II.

**T**HE disease of which I am about to speak, though sometimes met with in adults, is most certainly first produced in early infancy ; and, as I apprehend it to arise from the natural structure and disposition of some parts of the child while it is yet unborn, I shall begin with a short account of these parts during the residence of the fœtus in the uterus.

THE parts which I mean, are, the spermatic vessels, the testicles, and epididymis, a part of the peritoneum, the aperture in the abdominal muscle, and the scrotum.

By diligently observing the structure, disposition, and connexion of these in so early a state as that of a fœtus of five or six months ; and by following them in their growth and progress, to that of  
an



an infant ; such information may (I think) be obtained, as will fully and clearly illustrate the present matter.

THE testicles of all children are originally formed and lodged in the cavity of the belly ; they remain there till the child is born, or till very near that time ; and pass out from thence, each through an opening which leads into the groin ; here they generally remain some little time, more or less in different subjects, and at last descend into the scrotum, where they are suspended partly by their own vessels, and partly by the general attachment and connexion of the membranes, &c. which include them. The disposition of the testicle, and of its appendix the epididymis, while they remain in the abdomen of a foetus, their connexion with each other, and with other parts, their progress toward the opening by which they pass out, their determination to that opening, and the structure and disposition of the parts

ap-



appointed for their reception both immediate, and future, are circumstances, which, if properly attended to, will lead us not only into a knowledge of the parts themselves, but of other matters of no small consequence in the animal œconomy.

WHEN I say that the testicles are lodged in the cavity of the abdomen, I must desire not to be misunderstood, as if I meant to say that they were within the peritoneum; they certainly are not, but are within the cavity of the belly, in the same manner as the intestines, and some other parts are, which, strictly speaking, are behind the peritoneum; but they are so loose, and so dependent from a kind of stalk, formed by the insertion of the spermatic vessels into them, and project so much into the cavity of the abdomen, as to seem within it--- and in one sense are so.

THEIR situation is not so very precise, as not to vary a little sometimes; but

C

the

the most frequent is some way below the kidney, pretty near parallel to the upper part of the urinary bladder as it is upheld by the urachus, &c. and resting upon the psoas muscle. The spermatic vessels lie behind the peritoneum enveloped in the membrana cellularis, and the body of the testicle projecting into the abdomen is loose and moveable from that pedicle formed by the insertion of the spermatic vessels into it; it is of an oblong figure, and its greatest length is upward and downward: The epididymis lies stretched out behind the testicle, in the same direction; that is, upward and downward.

THE inferior part of each epididymis is extended downwards, and insinuates itself into a small orifice toward the lower part of the belly, almost opposite to the aperture in the tendon of the abdominal muscle.

IF the testicle be held aside, and the epididymis be moderately stretched, this  
orifice

orifice will become very visible, and the extremity of the epididymis will be seen entering into it.

By this orifice I have several times, without force or breach, passed a very small probe into the groin : the probe always passed through the aperture in the tendon of the abdominal muscle, and, upon dividing the skin, seemed to be covered by, or enveloped in, a small membranous pouch, or sacculus, made by a protrusion of the peritoneum,

In some I have traced this little sacculus through the opening in the muscle, (which it always passed) into the upper part of the groin, and always found it to be a continuation of that part of the peritoneum which lines the muscles of the abdomen.

THAT extremity of the epididymis, which passes into the mouth of this little sacculus, is attached, or adherent

to the inside of it, in such manner, that though the testicle is so loose at the insertion of the spermatic vessels as to permit very free motion from side to side, yet if either it, or the spermatic vessels, be pulled straight upward, toward the kidney, this adhesion will be found to detain it from going higher, unless the epididymis breaks, which a small degree of force will effect, it being very tender.

WHILE the testicles continue in the abdomen they are always naked, that is, they are not enveloped in that loose bag in which they are constantly found when in the scrotum, called tunica vaginalis testis.

As the foetus increases in size and advances towards maturity, the testicles proceed lower down, and approach nearer to the openings in the abdominal muscle; and if they have not passed out just before the birth (which is sometimes the case) the distention of the lungs and  
thorax

thorax by the air, and the action of the muscles of respiration, soon push them forth from the belly, through the muscle, into the groin.

THE safe and certain passage of the testicles from the abdomen into the scrotum, is a circumstance of great consequence ; and, like every other part of the animal œconomy, is provided for, and executed with such order and beauty, as to bespeak its Great Director.

I HAVE already taken notice, that on each side of the lower part of the inside of the cavity of the belly, was a small opening ; that in many subjects I could, without force or breach, pass a small probe, by means of this orifice, through the aperture in the tendon of the abdominal muscle ; and that the probe, when thus passed, appeared to be enveloped in a very small membranous sacculus, formed by a production of the peritoneum.

By



By this means a proper and convenient receptacle for the testicle is provided, and kept ready for it in due time.

IN most of the foetus's which I have examined, it has appeared to me that these little sacculi were parts originally formed; but whether it is constantly and invariably so, I will not pretend to say: Nor indeed is it of much consequence to my present purpose, whether they are constantly so, or not; for the event will be exactly the same, whether sacculi are formed by a production of the peritoneum passing through the tendinous aperture in the abdominal muscle, and placed ready to receive the testicle when it shall be pushed through; or whether this tendinous opening is loosely covered by a membrane, so very dilatable, as to give way to any impulse, and pass out before the body which is pushed against it.

IN



IN either case, the testicle, as soon as it has passed the opening in the muscle, will be found enveloped in a sacculus, formed by a production of the peritoneum, the upper part of which sacculus passes through the muscle, and communicates with the cavity of the abdomen by an orifice, patent, and visible.

THIS the mere examination of the fœtus makes to appear highly probable; but its truth is, I think, proved incontestably (at least with regard to the *effect*) by the following facts.

1. THAT the Testicles of almost all Children, though originally formed and lodged within the belly, yet sooner or later after their birth, are found either in the groin, or in the scrotum; that is, they are found on the outside of the abdominal muscle.

2. THAT

2. THAT the scrotum has no communication with the cavity of the abdomen, but through the mouths or entrances of the membranous facculi in which the testicles are included.

3. THAT when the testicles are got into the groin, or scrotum, by having passed through the aperture in the tendon of the abdominal muscle, they are always found enveloped in a loose membranous bag, in which they were not contained while they were within the belly.

4. THAT the entrances from the abdomen, into these facculi containing the testicles, are generally to be seen open in a new-born child. And,

5. THAT by laying these facculi open, the testicles are found within them, naked ;

naked ;---that is, they are found in the same state with regard to covering as they were in, while within the cavity of the belly.

THIS is the state of the testicle when it is got into the scrotum, the place appointed for its residence ; and, lest it should deviate from the right path, and, by not passing through the aperture in the muscle, be detained within the cavity of the belly, that portion of the epididymis which precedes it in its passage toward the abdominal opening, insinuates itself into the orifice which leads to the sacculus appointed for its reception ; by this means determining the passage of the testicle, and preventing its deviation\*.

It is true, that in this, as well as every other part of the animal frame, the general laws of nature are sometimes interrupted by accident, and mal-formations

\* This must be understood as a description of the appearance these parts make at first view : for both the epididymis and testicle are truly behind the peritoneum.

mations are produced ; but, in general, this is the process, and this the appearance.

THE bag, which contains the testicle when in the groin, is loose, and large, *compared to the size of the testis* ; it is of a globular figure, is covered on its outside by a cellular substance, and communicates with the cavity of the belly by *passing through the oblique muscle*.

IF the testicles remain any time in the groin, (a thing not very unfrequent) the communication between the sacculi and the belly continues open all that time, at least I have always found it so in all those whom I have examined.

WHEN the testicles are got below the groin into the scrotum, the sacculi which contain them assume a pyriform kind of figure, having their largest end lowest ; they are connected with the membranes of the scrotum by means of the common  
cellular

cellular structure, but so very loosely in young subjects as to be separable with the utmost ease.

THEY still for some little time continue to communicate with the cavity of the belly, by a large orifice capable in a mature foetus, or in a child newly born, of admitting a common crow-quill. This the eye-sight, the passage of a probe, or the descent of a fluid poured upon the mouth of the opening, will prove to the satisfaction of any inquirer ; and if the sacculus be now laid open, either from its bottom upward into the belly, or from its orifice within the belly, downward, the most clear and convincing proof will appear, that the membrane which constitutes the inside of it is a production of, or a continuation from, that part of the peritoneum which lines the abdominal muscles, and covers the spermatic vessels, &c. &c.\*

D 2

UPON

\* If this is doubted by any who have no immediate opportunity of examining it, I can shew it to them in more than one subject which I keep by me.



UPON this division of the sacculus it will also appear, that the testicle, and epididymis within it, have no other covering than what they brought out from the abdomen, and that notwithstanding they are protruded into, and apparently contained within the sacculus, yet they still are (as they were originally) behind the peritoneum.

WHETHER it be by the weight of the testicle now become pendulous from the spermatic chord, or from the action of the abdominal muscles, or from what other cause, I know not; but soon after the testicles are got fairly into the scrotum, the orifices and passages to these sacculi are closed, and obliterated in such manner, that neither a probe nor a fluid will now pass from the belly into them, nor from them into the belly.

THE passage of communication becomes close some way above the epididymis,



dymis, and the bag by this means forms a cavity much larger than the testicle, which is loosely included in it, and kept moist by a fine lymph constantly found there.

THE time at which this communication is stopt, by the passage being shut, is uncertain and various; for though it most frequently happens soon after the testicles are got into the scrotum, yet it is not constantly so; I have seen them open at four years old; and in an adult; and others have seen them open at a time between these: but whenever they do close, they form those bags which are then called the tunica vaginales testium, from or to whose cavity there is no longer any passage.

THUS it plainly appears, that what in the foetus was the little sacculus for the reception of the testicle, and what was the loose bag which contained it while it staid in the groin, (during all which  
time

THEY who suppose this to be the case, do also suppose that the portion of intestine or omentum passed out from the belly at first in a common hernial sac in the usual manner; but that by time, or accident, a breach is made in the peritoneum forming that sac, and thus these parts are brought into contact with the naked testicle; which, most certainly is not the case: it is an original disease, unaltered by time or accident; and, though sometimes met with in the adult, is always first produced in early infancy.

THE facculus which receives the testicle when it has passed the aperture in the abdominal muscle, is open to the cavity of the belly; and the same, causes, and the same force which push the testicle into it, do also sometimes thrust in a portion of intestine or omentum.

IN

IN a natural state, and according to the most usual course, the openings or mouths of these sacculi become close, and the passages obliterated, soon after the testicles get into the scrotum ; the tunica vaginalis testis is thus formed, and all communication with the belly prevented ; but if a piece of gut or caul has slipped in with, or just after the testicle, the opening cannot close ; the tunica vaginalis testis cannot be properly formed, but the intestine, testicle and omentum must be all together, in immediate contact with each other within this sacculus, whose mouth must still remain open to the abdomen.

AND, as I have already taken notice, that the mouths of these sacculi always remain open while the testicle continues in the groin, a much longer time is by this means furnished in many subjects for this accident to happen in ; not to mention again, that in some children

E

they

they do not close till the testicles have been a great while in the scrotum, and that they have been found open in adults.

WHOEVER has a clear idea of the state of these parts, must see, that whatever passes into these sacculi while they remain open, let the subject's age be what it may, must be in the same cavity, and in contact with the naked testicle ; and though the passage from the belly will become close and be obliterated, if the parts which have fallen into it are returned back, and kept up by proper bandage ; yet if they are not returned into the belly, or not kept there when returned, the passage can never close, and the hernia must for ever remain ; and, while it does remain, will necessarily be of the kind mentioned in the Title.

FOR though this is a disease produced by such a state of parts as is peculiar to  
an

an infant, and which a small space of time makes such an alteration in, as to prevent its happening after that state of infancy, yet if it is not taken proper care of when it has happened, it will most probably continue during the life of the patient; and that therefore it must sometimes be found in adults--- a case, which I am convinced, happens much oftner than is suspected.

THE more I have thought of this matter, the more I am convinced of the truth of what I have said in the preceding pages: even accidents and malformations, which prevent the usual and regular process, contribute to elucidate the subject; and though they are deviations from the natural course, yet help to inform us what that would be, if it had not been prevented: a truth, which will appear in two of the following cases.

E 2

S E C T.





## S E C T. IV.

**J** GOODCHILD, a man who had been ruptured from his infancy, was brought into St. Bartholomew's Hospital, labouring under such symptoms from stricture, as to render the operation immediately necessary, but to leave little room to expect that it would be successful.

THE operation was performed in the usual manner, but upon returning the intestine into the abdomen, I found that the testicle was naked, and that the gut had been in contact with it.

THE man died the next day, and the parts were in so gangrenous a state, as not to permit any satisfactory examination of them; all that could be learnt was, that the intestine had been in the same cavity with the testicle, and that  
the



the sac containing them was open to the abdomen : this was all that appeared in this subject, which, though it did not give me much satisfaction in present, determined me to examine more closely such cases in future.

MARCH 23, 1756. William Pearce, a healthy stout man, twenty-five years old, was brought into St. Bartholomew's Hospital, complaining of a painful swelling in his right groin, a slight degree of nausea, and an incapacity of discharging any thing by stool.

THESE complaints had subsisted three days, when he was taken into the house.

IN the groin on the right side was a swelling, about the size of a middling lemon, of an oblong figure ; its greatest length being transverse or stretching from the pubis to the ilium ; the tumor seemed pretty full, was constantly painful in some degree, but much more so upon being handled.

THE

THE scrotum on this side was deficient from his birth, and neither testicle nor spermatic process could be distinguished.

THE man being asked, said, that he had had more or less of this swelling ever since he could remember ; that he had never been sensible of any testicle on that side, and that he had formerly wore a bandage, but could not endure the pain it gave him,

THE symptoms being such as indicated a stricture on some part of the intestinal canal, I endeavoured to return the contents of the swelling into the belly, but could not succeed.

As his pain was not very great, except when the part was handled ; as he had but little fever, and neither vomiting nor hiccup, I ordered him to be largely bled, to have a purging glyster,  
to

to cover the tumor with a soft pultice, and to keep in bed.

THE next day the swelling seemed rather abated, and less tense; his sickness continued, but without any vomiting; he was perfectly easy in his belly, but had discharged nothing by stool.

I TRIED again to return the parts, but ineffectually; and, as the handling them was excessively painful to him, I ordered him to be again bled, to repeat his glyster and pultice, and to take frequently two or three spoonfuls of a purging mixture, but still could obtain no stool; and, on the third day, his pain being much increased, with the addition of hiccup and vomiting, I endeavoured to relieve him by the operation.

I BEGAN the incision in the usual place, and continued it as low as the tumor reached.

UPON

UPON the division of the skin and membrana adiposa, a firm membranous bag or sacculus came into view ; this I took to be the hernial sac ; but, upon laying it open, I found that it contained quantity of bloody serum, a piece of omentum, a portion of intestine, and the testicle.

THE testicle and its epididymis were both naked ; that is, they were not enveloped in a tunica vaginalis, and the bag which contained all these parts was open at its upper part into the cavity of the abdomen by a narrow neck, which neck passed through the aperture in the obliquus descendens muscle, by the tendon of which that stricture was made on the intestine which produced the symptoms.

IN this case neither the intestine nor the testicle were got below the groin, there being no scrotum on that side ; but the

the sac which contained the testicle, intestine and omentum, was plainly that sacculus which was originally designed to become the tunica vaginalis testis; its communication with the belly, the state of the testicle and epididymis, and the date of the rupture, all prove this : The disease was from early infancy, the testicle and epididymis had no covering but their proper and immediate coat ; the sacculus communicated with the cavity of the belly, and the testicle was connected with its internal and lower part.

As the scrotum was deficient on that side, the testicle could never descend so as to become pendulous, and thereby give the tunica vaginalis an opportunity of becoming close at its upper part ; and a piece of intestine having passed in, was another reason why the orifice could not contract itself ; the testicle always remaining just on this side the abdominal muscle, in the groin, was the reason

F

why



why he never could keep the intestine within the belly by a truss, the pad or bolster of which must press on the testis in such manner as to give great pain.

IN July last, J. Leak, a man about thirty-five, was brought into St. Bartholomew's Hospital, with all the symptoms and all the appearances of a strangulated intestine.

THE gentleman under whose care he had been, had used all proper means to relieve him, and had endeavoured to return the parts, but without success; and there was nothing left for me to do, but to perform the operation, which I did immediately. The swelling, which was confined to the groin, was more oblong than usual, stretching from the pubis to the ilium, and had that inequality to the touch as implied a pretty large portion of omentum to be contained in it.

UPON

UPON making the incision, I observed that the hernial sac was not enveloped by any tunica vaginalis, but that it lay immediately under the adipose membrane, and had none of those fine tendinous bands or expansions on its outside, which are generally seen on the outside of a common hernial sac.

THE sac being laid open, the stricture divided, and the parts (which were a large portion of omentum, and a small one of intestine) returned, the testicle was found just within the aperture in the tendon of the abdominal muscle, in the cavity of the belly; it was naked, and a portion of the epididymis was adherent to the upper part of the neck of that sac, which had contained the gut and caul just at its passage through the tendon; the spermatic chord was so short, as not to permit the descent of the testicle any lower.

IN this case, the testicle not being capable of passing through the aperture in the muscle, the omentum and intestine were pushed out in its stead, and had dilated that sacculus (which, if the testicle had taken its natural course, would have formed its tunica vaginalis) into a hernial sac, of size capable of containing a large portion of caul, and some intestine. This also was a rupture from early infancy, but the patient, not knowing what it was, had neglected it.

SOON after this I had an opportunity of looking into the body of a youth about fifteen years old, who died of another disease; but had been ruptured from his birth.

IN a sacculus, which passed through the opening in the abdominal muscle, were contained a large portion of the intestine ilium, and a small piece of the colon, in contact with the naked testicle; the testicle had no other covering than  
its

its proper tunica albuginea, and the epididymis was united with the posterior part of the sac: The sac lay immediately under the membrana adiposa, and had no covering from the tunica vaginalis of the chord.

THIS is precisely that case, which is supposed to be occasioned by the breach both of the peritoneum, and of the septum between the two tunicae vaginales; but which, I flatter myself, that I have proved in the foregoing pages, to be produced in another manner: certain I am, that the anatomy of the parts, both natural and diseased, give no countenance or support to the former opinion; and, if I am not hindered by prejudice and partiality from judging properly, the latter appears to me to have all the support from it which it can give.

By considering what has been said it will appear, that, in this particular kind of hernia, the bag containing the parts which have passed out from the abdomen,

men, although it be really a production of the peritoneum, and passes through the tendon of the oblique muscle, yet is not what is commonly meant by the term a hernial sac ; but is that sacculus, which, if the intestine had not been pushed into it, would, by closing at its upper part, have become the tunica vaginalis testis.

THAT this sacculus cannot be included in the tunica vaginalis of the chord, no more than the sac of the most frequent species of hydrocele is, it being the same bag in one case as in the other, with this difference only, that in the latter it is close at top, and does not communicate with the belly ; in the former it is open, and does communicate.

THAT the tunica vaginalis testis being open at its upper part to the cavity of the belly, the testicle cannot be enveloped in it in the usual manner, but must  
be



be found naked in the same common cavity with the intestine.

WHEREAS in the common hernia, the tunica vaginalis of the chord envelopes the sac, the spermatic vessels lie behind it, and the testicle is included in a distinct cavity formed by the tunica vaginalis testis.

THE former case happens while the passage for the testicle is open, and consequently there can be no hernial sac in the usual sense of the term, but the tunica vaginalis testis is thus converted into one.

THE latter (or common hernia) happening after this passage is obliterated, another portion of the peritoneum is thrust before the intestine, &c. through the tendon of the muscle into the groin or scrotum, thus constituting a hernial sac; which sac forms a cavity perfectly distinct from that of the tunica vaginalis testis, lies anterior to the spermatic chord,

chord, and is enveloped in the tunica vaginalis thereof.

By considering the state of these parts in an infant, it will also appear, how necessary it is to be sure of the situation of the testicle before the pad of a truss is applied to restrain a rupture; since if the testicle is still in the groin, it must not only be bruised and hurt by the pressure, but will also be prevented from descending; whereas if it be got below the groin, the bandage will not only keep up the intestine, but contribute also to the closing of the tunica vaginalis testis; the same application thus becoming a cure in one case, and adding to the disease in the other.

HENCE also the sudden appearance, and sometimes as sudden dissipation of tumors, either flatulent or watery, which are frequently seen about the spermatic chord, scrotum and testicles of young infants, may be accounted for.

AND



AND hence also may be seen the reason, why by far the greater number of children, who are ruptured in their early infancy, are males.

F I N I S.



And hence also may be seen the  
reason why the  
of children, who are in their  
early infancy.



